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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,443	12/10/2003	Alexander E. Mericas	AUS920010547US2	2319
23307	7590	02/23/2005	EXAMINER	
SYNNESTVEDT & LECHNER, LLP			WEST, JEFFREY R	
2600 ARAMARK TOWER			ART UNIT	PAPER NUMBER
1101 MARKET STREET				2857
PHILADELPHIA, PA 191072950				

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,443	MERICAS, ALEXANDER E.	
	Examiner	Art Unit	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 December 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-6 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "42" and "81" (Figure 1).

2. The drawings are objected to because of the following informalities:
Figure 1 contains an unknown symbol above reference number "28".
In Figure 2, the "performance monitor" is labeled "250" instead of "50" as it is in the specification on page 6, line 6.

3. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

On page 4, line 5, "at least on monitor mode" should be ---at least one monitor mode---.

Appropriate correction is required.

Claim Objections

5. Claims 1, 3, and 5 are objected to because of the following informalities:

In claim 1, line 1, to avoid problems of antecedent basis, "the occurrence" should be ---an occurrence---.

In claim 1, line 2, to avoid problems of antecedent basis, "the operation" should be ---operation---.

In claim 1, lines 4-5, to avoid problems of antecedent basis, "said monitor" should be ---said at least one monitor---.

In claim 1, line 5, to avoid problems of antecedent basis, "said monitor" should be ---said at least one monitor---.

In claim 1, line 7, to avoid problems of antecedent basis, "said events" should be ---said one or more events---.

In claim 1, lines 8-9, to avoid problems of antecedent basis, "said events" should be ---said one or more events---.

In claim 3, line 1, to avoid problems of antecedent basis, "the occurrence" should be ---an occurrence---.

In claim 3, line 2, to avoid problems of antecedent basis, "the operation" should be ---operation---.

In claim 3, line 4, to avoid problems of antecedent basis, "said control element" should be ---said at least one control element---.

In claim 3, lines 4-5, to avoid problems of antecedent basis, "said control element" should be ---said at least one control element---.

In claim 3, line 5, to avoid problems of antecedent basis, "said counting elements" should be ---said plurality of counting elements---.

In claim 3, lines 5-6, to avoid problems of antecedent basis, "said counting elements" should be ---said plurality of counting elements---.

In claim 3, lines 6-7, to avoid problems of antecedent basis, "said events" should be ---said one or more events---.

In claim 3, line 7, to avoid problems of antecedent basis, "said counting elements" should be ---said plurality of counting elements---.

In claim 3, line 8, to avoid problems of antecedent basis, "said events" should be ---said one or more events---.

In claim 5, lines 1-2, to avoid problems of antecedent basis, "said counting elements" should be ---said plurality of counting elements---.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 2 and 6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 2 and 6 are rejected under 35 U.S.C. 112, first paragraph, because they recite, "wherein the number of occurrences of incidences of events equals X, and the number of performance monitor counters equals Y, whereby said at least one monitor mode control register groups said performance monitor counters into Z groups, wherein $Y \leq X$." The specification, however, provides two different embodiments for grouping the performance monitors.

The first grouping method is described "in accordance with a first embodiment of the invention in which the PMC'S are divided evenly among the events being monitored. When the number of PMC'S and number of events being monitored cannot be divided evenly, one or more of the PMC'S will have less than others. Referring to Figure 3, at step 302, the number of events being monitored is determined. At step 304, the number of PMC'S available for monitoring is

determined, and at step 306, the number of PMC'S available is divided by the number of events to determine the grouping of the PMC'S (step 308)."

In this embodiment a "number of events being monitored" (i.e. X) and a "number of performance monitor counters" (i.e. Y) are determined and the grouping is determined when "the number of PMC'S available is divided by the number of events". This embodiment does not divide the number of counters by a number of occurrences of incidences of events to determine a number of groups.

The second grouping method is described by "[r]eferring to Figure 4, at step 402, the number of events being monitored by the PMC is determined, and at step 404, the number of PMC'S available for doing the monitoring is determined. At step 406, the frequency of occurrence of each event being monitored is identified and, at step 408, based upon this determination, the PMC'S are grouped so as to take advantage of the statistical data regarding frequency. Thus, events that occur more frequently will have more PMC'S allocated to them, and events that occur less frequently will have less PMC'S allocated. Finally, at step 410, the events are monitored and the storage of the counted events is allocated based upon the grouping. Thus, for example, an event A, which is identified as being a frequently-occurring event, may be assigned six counters in an initialization stage, while event B, which is identified as happening very rarely, may be assigned only two counters during the initialization phase."

Art Unit: 2857

In this embodiment "a number of events being monitored by the PMC", "the number of PMC'S available for doing the monitoring", and "the frequency of occurrence of each event being monitored is identified". The, the three determined values are used to group the PMC'S without any specific relationship or determining a specific number of groups.

For these reasons, the specification does not sufficiently enable one having ordinary skill in the art how to make/use the invention as claimed.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is considered to be vague and indefinite because on line 7 it recites, "with the counting incidences" while there is no previous mention of any "counting incidences". Therefore, it is unclear to one having ordinary skill in the art as to what "the counting incidences" refers.

Claim 3 is similarly rejected under 35 U.S.C. 112, second paragraph, because it recites, "in connection with the counting of incidences" while there is no previous mention of any "counting of incidences". Therefore, it is unclear to one having ordinary skill in the art as to what "the counting of incidences" refers.

Claims 2 and 4-6 are rejected under 35 U.S.C. 112, second paragraph, because they incorporate the lack of clarity present in their respective parent claims.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-6, as may best be understood, are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,557,548 to Gover et al.

With respect to claims 1 and 3-5, Gover discloses a performance monitor for monitoring the occurrence of incidences of one or more events related to the operation of a processor (column 2, lines 1-7), comprising at least one monitor mode control register/control element (column 3, lines 6-12) and a plurality of performance monitor counters (column 3, lines 6-12) operatively connected to said monitor mode control register/control element (column 3, lines 18-20 and Figure 2), said monitor mode control register/control element grouping said performance monitor counters (column 3, lines 18-28) so that when one of said performance monitor counters reaches capacity in connection with the counting incidences of a first of said events, a second of said performance monitor counters begins counting subsequent incidences of said first of said events (column 3, lines 40-63).

With respect to claims 2 and 6, as may best be understood, Gover discloses that the number of events equals X, the number of performance monitor counters equals Y, and said at least one monitor mode control register groups said performance monitor counters into groups of Z, wherein $Y / X = Z$ (i.e. when four events are to be monitored and four counters are present, the counters are in groups of one (column 4, lines 57-60 and Figure 4) and when one large event is to be monitored and four counters are present, the counters are in a group of four (column 4, lines 60-64 and Figure 4).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 5,257,358 to Cohen teaches a method for counting the number of program instructions completed by a microprocessor.

U.S. Patent No. 6,233,531 to Klassen et al. teaches an apparatus and method for monitoring the performance of a microprocessor.

U.S. Patent No. 5,835,702 to Levine et al. teaches a performance monitor within a data processing system whereby a counting function to be performed by a particular counter is dependent upon a particular event programmed within another counter within the performance monitor.

U.S. Patent Application Publication No. 2002/0026524 to Dharap teaches a data list transmutation and input mapping system including means for distributing a

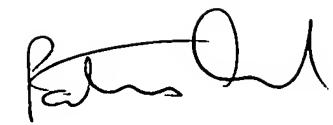
number of table entries across the number of available entries by dividing the number of table entries by the number of available entries, in a first assigning step, assigning a number of table entries, said number equal to the integer resulting from said dividing step, to each of the number of available entries and, in a second assignment step, assigning any unassigned table entries to at least one of said available entries (0025-0026).

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. West whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (571)272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jrw
February 16, 2005


JULIE A. WILLIAMS
PATENT EXAMINER